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Report of the United Nations Human Settlements Programme on human settlements statistics

Note by the Secretary-General

In accordance with Economic and Social Council decision 2018/227 and past practices, the Secretary-General has the honour to transmit herewith the report of the United Nations Human Settlements Programme (UN-Habitat) on human settlements statistics, which is presented to the Commission for discussion. It presents progress led by UN-Habitat in the field of human settlements statistics collection and compilation methods and on the development of methodologies and advancements in data collection and reporting on selected human settlements indicators that are relevant to the Sustainable Development Goals. Recommendations on improving the monitoring of and reporting on human settlement indicators for national statistical offices are highlighted.

The Commission is invited to endorse the national sample of cities methodology for countries that are constrained in terms of the national monitoring of and reporting on all their cities; endorse the establishment of a group of experts for the revision of the guidelines and principles for the implementation of the City Prosperity index; endorse the establishment of a group of experts for the development of guidelines for identifying slums; comment on challenges relating to the definition of cities; and comment on the coordination mechanism for work on human settlements statistics at the international level. Points for discussion by the Commission are contained in paragraph 49 of the report.

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I. Introduction

1. At its forty-fifth session, held from 4 to 7 March 2014, the Statistical Commission took note of the report of the United Nations Human Settlements Programme on human settlements statistics (E/CN.3/2014/17), in which the Secretary-General summarized advances in a methodology developed by UN-Habitat and partners to measure security of tenure in a consistent manner across countries and regions. Further work on that methodology led to the refinement of the Global Land Indicators Initiative guides, timely reporting on the plight of slum dwellers, and improved global monitoring of access to urban basic services.

2. The present report provides an overview of the activities carried out since 2014, including refinements for several methodologies connected to the global monitoring of the Sustainable Development Goals relating to urban matters, which are available as part of a synthesis report on Goal 11.[1] More of the methodological work is featured in the report on the implementation of the New Urban Agenda (A/73/83-E/2018/62). The report further elaborates on the progress of methodological work for urban indicators, the consultative workshops on human settlements statistics, the advancement of the application of the framework for a national sample of cities and the City Prosperity Initiative by countries worldwide, related regional training and capacity-building activities, data collection activities and advocacy.

II. The Sustainable Development Goals and human settlements statistics

3. Since the submission of the previous report on human settlements statistics, the global community has embraced several agendas relating to urban matters, including, most notably, the New Urban Agenda (General Assembly resolution 71/256, annex) and the 2030 Agenda for Sustainable Development (General Assembly resolution 70/1), along with its associated global indicator framework (General Assembly resolution 71/313, annex), which is leading to the expansion of the scope and breadth of global human settlements statistics within the whole statistical system. This has also helped to promote the engagement of a wider range of data producers and users around human settlements indicators.

4. The New Urban Agenda and 2030 Agenda emphasize the need to ensure that progress reports are based on an analysis of the activities of governments at the national, subnational and local levels, as well as on analysis from the reports of UN-Habitat, other relevant entities of the United Nations system, relevant stakeholders in support of the implementation of the New Urban Agenda, and the reports of the Governing Council of UN-Habitat. All the evidence should also incorporate, to the extent possible, the input of multilateral organizations and processes, where appropriate, civil society, the private sector and academia, and should build on existing platforms and processes, avoid duplication and respond to local, subnational and national circumstances and to legislation, capacities, needs and priorities.

5. Other global agendas, such as the Paris Agreement adopted under the United Nations Framework Convention on Climate Change and the Sendai Framework for Disaster Risk Reduction 2015–2030, have also introduced new sets of indicators and statistics, thereby increasing the already expanded framework of indicators. There are

[1] United Nations Human Settlements Programme, *SDG 11 Synthesis Report 2018: High-Level Political Forum 2018 – Tracking Progress Towards Inclusive, Safe, Resilient and Sustainable Cities and Human Settlements* (Nairobi, 2018).

now 81 indicators among the Sustainable Development Goal indicators that have a direct or indirect link to human settlements indicators and statistics. The New Urban Agenda and all the other complementary global agendas largely rely on the core set of human settlements indicators and statistics developed in relation to the Sustainable Development Goals for global monitoring and reporting.

III. Progress on the reporting of human settlements statistics

6. In line with its mandate and the spirit of the New Urban Agenda, UN-Habitat has coordinated three major reports detailing the progress and achievements in human settlements indicators and statistics over the past five years. The latest trends on wide-ranging issues affecting human settlements as well as many global urban challenges, such as air pollution, urban transport, waste management, the cost of housing, urban sprawl, climate change and urban public spaces, are presented in the following reports:

(a) *World Cities Report 2016: Urbanization and Development – Emerging Futures*;

(b) The quadrennial report of the Secretary-General on progress on the implementation of the New Urban Agenda (A/73/83-E/2018/62);

(c) The synthesis report on Goal 11 indicators.[1]

7. In July 2018, the first of a series of five quadrennial reports, to be prepared over the period from 2016 to 2036, was considered by the Economic and Social Council (A/73/83-E/2018/62). Its findings were elaborated upon in the synthesis report profiling the progress towards Goal 11, which was discussed as part of the high-level political forum on sustainable development in 2018. Jointly, those reports are a key component of the follow-up to and review of the implementation of the 2030 Agenda, the New Urban Agenda and other regional urban agendas.

8. The need for countries to monitor at the local level, but to report progress on cities and human settlements at the national level, is acknowledged in the synthesis report. Addressing and resolving urban issues from the methodological point of view is a prerequisite and an entry point for elaborating on a number of sustainable goal and targets, therefore requiring policy coherence and the development of vertical and horizontal systems of collaboration on monitoring, reporting and implementation.

9. The three above-mentioned progress reports were presented at the high-level political forum on sustainable development in 2018, with a view to ensuring coherence, coordination and collaborative linkages with the follow-up to and review of the 2030 Agenda for Sustainable Development and other global agendas.

IV. Global and regional workshops related to capacity-building activities

10. UN-Habitat and other custodian agencies have organized regular technical cooperation workshops in the field of human settlements statistics, which has included country advisory services, national and regional workshops and direct technical assistance.[2] Over the past five years, technical assistance has been directed at building the institutional capacity of national statistical offices to harmonize

[2] See, for example, https://unhabitat.org/the-journey-to-monitoring-sdg-11-kick-off-in-the-asia-pacific-region/ and https://unhabitat.org/preparing-cities-in-africa-to-monitor-and-report-on-goal-11/.

systems for collecting human settlements statistics, refining definitions relation to urban areas and designing data collection tools. Such assistance has also included conducting routine human settlements statistics surveys that cover the collection of data on composite indicators, such as those that monitor slums, access to basic services, land tenure security or urban governance and civic participation. Capacity-building activities have also included the compilation of analytical and performance indicators that are relevant to the understanding of human settlements policy and the monitoring of programme implementation. In recent years, UN-Habitat provided technical assistance, to varying degrees, to countries including Botswana, Cameroon, Colombia, Ecuador, Egypt, Ethiopia, India, Kenya, Kuwait, the Republic of Korea, Rwanda, Saudi Arabia, Tunisia, Uganda, the United Republic of Tanzania and Viet Nam. At the time of writing, several global projects for capacity-building were being implemented in countries across several regions.

11. Since 2014, 26 capacity development workshops have been organized, with nearly 1,000 participants drawn from national statistical offices, local and national governments, civil society, academia, and public and private institutions, as well as representatives from special groups such as youth, women and persons with disabilities. The regional workshops for national statistical offices have proven to be a cost-effective way to inform national statisticians about the latest international recommendations linked to human settlements statistics. The national statistical offices within a given region generally face common challenges and the regional workshops not only provide space for deliberations on conceptual problems but are also an excellent forum for the exchange of experiences and best practices. Over the past three years, UN-Habitat and partners have jointly conducted a number of regional and international workshops, including: an international workshop on human settlements indicators linked to the Sustainable Development Goals in Naivasha, Kenya, in February 2017 (93 participants from 31 countries); a regional workshop on human settlements indicators for Africa, organized with the Economic Commission for Africa in December 2017 (38 participants from 11 countries); a regional workshop on human settlements indicators for Asia-Pacific countries, organized with the Economic and Social Commission for Asia and the Pacific in March 2018 (46 participants from 14 countries); a regional workshop for Arab States, organized with the Economic and Social Commission for Western Asia in July 2018 (32 participants from 11 countries); and an international workshop on human settlements statistics in Kuala Lumpur, in February 2018, as part of the World Urban Forum (85 participants from 27 countries). Over the next two years, more capacity development initiatives will be directed at cities and local governments, as well as national statistical offices. Most of the efforts will focus on how to apply the concepts of the national sample of cities, harmonizing city definitions, the use of geospatial technologies in monitoring Goals as they relate to urban matters, establishing national statistical systems and networks to support urban monitoring of a diverse and evolving set of Sustainable Development Goal indicators relating to urban matters, data compilation and presentation at city level, and how civil society and urban communities can contribute to global reporting on human settlements.

12. Since 2016, UN-Habitat and all other lead custodian agencies have developed indicator-specific training modules that provide step-by-step guidance on the concepts and methods of computation of several indicators relating to Goal 11. The modules are accessible to all countries and cities free of charge. In addition to the capacity development initiatives outlined above, the network of urban observatories available in many regions and countries provides capacity development concerning Goal 11. Training sessions on setting up urban observatories have been conducted in countries including Botswana, Egypt, Ethiopia, India, Jordan, Kuwait, Mexico, Saudi Arabia, Tunisia, Viet Nam and Zambia. Each session resulted in the creation of several local urban observatories. Other custodian agencies as relates to Goal 11 have

also been undertaking capacity development initiatives in collaboration with the regional commissions.

V. Data gaps and challenges in reporting on human settlements statistics

13. Despite the ongoing efforts of UN-Habitat and the larger network of stakeholders working on human settlements statistics, it should be noted that the need for technical assistance concerning human settlements statistics, in all countries, is much greater than the resources currently available. While some positive trends in the improvement of human settlements statistics have been observed globally, a critical gap remains in the production of human settlements data in many countries, especially as regards the spatial-analysis dependent indicators.

14. Many Sustainable Development Goal targets and indicators pertaining to urban matters refer directly to cities as the unit of analysis for tracking progress. Yet countries define cities differently, on the basis of a single criterion or a combination of criteria, which can include aspects such as population size or density (or both), economic function, the nature of activities (agricultural versus commercial), or the amount of locally generated income, as well as political and administrative measures. Informed guidelines on definitions, measurements and unified standards are necessary to ensure that the monitoring of and reporting on urban agendas and human settlements statistics follow harmonized and mutually agreed concepts. Without a single globally applicable definition of a city as the measurement unit for selected urban and human settlements indicators, countries are likely to compute estimates using various operational concepts, which could include the city core, urban agglomeration or metropolitan area, all of which use and apply different thresholds and methods, thereby making global comparisons difficult.

15. Over the past two decades, UN-Habitat as a focal point for urban issues has established various tools for global urban monitoring, which have contributed to the generation of urban data that are directly relevant for the monitoring of progress towards Goal 11. Such tools include the urban observatory model, the City Prosperity Initiative, the urban indicators programme and the national sample of cities approach. Many of the tools have been refined and modified in collaboration with other United Nations system entities in preparation for supporting the global monitoring of the Goals relating to urban matters. Some of those tools are discussed in greater detail below.

VI. Urban observatory model: mechanism for informed decision-making

16. With a view to finding creative solutions to the urban information crisis, UN-Habitat developed the urban observatory model for urban data collection and analysis, in partnership with cities.[3] Systematic guidance on setting up urban observatories has been provided to a number of countries, leading to the development of a global network of local, national and regional urban observatories that facilitate data collection and the monitoring of processes at the local level, and the aggregation and/or comparison thereof at the national and regional levels.

17. Urban observatories are well-positioned to address the frequently expressed need for reliable, high resolution urban data sets specific to the cities and immediate

[3] See https://unhabitat.org/urban-knowledge/guo/.

city-regions in which they operate. They assist in the strengthening of urban data capacities at the national, subnational and local levels, providing platforms to facilitate effective knowledge exchange and promote evidence-based governance built on a shared knowledge base. At present, UN-Habitat is overseeing and coordinating 374 urban observatories worldwide: 101 in Africa, 143 in Asia and 130 in Latin America. Those local urban structures are leading engagement at the local level on collecting, analysing and interpreting data for urban indicators related to the New Urban Agenda and the Sustainable Development Goals relating to urban matters through consultative and inclusive processes. UN-Habitat channels all newly developed tools and guidelines through the local urban observatories.

18. At the time of writing, intensive training in the collection and production of indicators within the Sustainable Development Goal framework is taking place in several urban observatories. UN-Habitat has been working with several partners to enhance the capacities of many urban observatories to continue to play a central role in data collection and reporting on the Goals and the New Urban Agenda. This critical mass of urban observatories constitutes a very important asset for the monitoring of and reporting on the international urban agendas.

VII. A national sample of cities: a model approach to monitoring and reporting performance of cities at the national level

19. Many Sustainable Development Goals indicators relating to urban matters require data collection at the local and/or city level. Countries are therefore compelled to define and identify the number of cities they have, to collect data on all those cities and, at the national level, to aggregate the data in terms of the average performance of these city-specific indicators. For many countries, it is not possible to collect information and report on all their cities, and this is particularly true for those that have limited resources (financial, institutional, human and systems). In such cases, UN-Habitat recommends the application of the national sample of cities approach, which will allow for the systematic selection of a sample of representative cities and for the continuous tracking of progress in those cities for reporting at the national level.[4]

20. The national sample of cities is a carefully constructed sample of cities that considers subregional and city-specific characteristics and variances in order to monitor the dominant urban patterns in a given country. The sample is one of the mechanisms that will create conditions to monitor and report on a consistent set of cities, which can enable countries to produce time series analysis to measure national progress in a more systematic and scientific manner. The sample of cities must be drawn up using sound statistical and scientific methodologies (see para. 22 below).

21. Data collection across all indicators for Goal 11 requires significant resources, ranging from financial, institutional and human resources to investing in new systems. Assessments undertaken by several custodian agencies, including UN-Habitat, since 2016, revealed that most countries face challenges as regards the level of resources available to support quality data systems and of resources to support the monitoring of all indicators for Goal 11. However, a few countries, in developed regions in particular, have well-established urban data collection structures and enough resources to cover all the needs of monitoring and reporting on progress towards Goal 11 for all their urban areas and/or cities.

22. In order to support countries with limited resources in their systematic data collection on Goal 11 indicators, UN-Habitat and other partners developed the

[4] See https://unhabitat.org/national-sample-of-cities/.

national sample of cities approach. The approach helps countries to select a non-biased sample of representative cities. The national sample of cities is drawn up using sound statistical and scientific methodologies based on, among other factors, national importance, geographic location, size of the city, population of the city, economic and political importance, or the representation of youth and/or children and women. The advantages and main steps proposed for the selection of a national sample of cities are set out in the annex to the present report.

VIII. The City Prosperity index: an efficient tool for measuring the performance of cities using comprehensive urban data analytics

23. A commitment to partnership and cooperation, supported by a strong monitoring mechanism that measures policies and investments based on close to real-time evidence, will be required to meet the challenge of creating inclusive growth and sustainable urban development. Such a mechanism should serve to prioritize activities, ensure strategic investments, monitor the coverage of plans and measure the impact at the national, regional (territorial and municipal levels) and global levels. UN-Habitat has developed a global monitoring framework, known as the City Prosperity Initiative, that enables Member States to monitor and evaluate their efforts towards the implementation of the urban components of the sustainable development agenda, from the domestic and the international perspectives, by using a unified and sound mechanism that measures success and assesses failures at different government levels.

24. The City Prosperity Initiative integrates tools and mechanisms for monitoring progress towards Goal 11 and other indicators relating to urban matters that are aligned with international and national guidance on gender, youth and human rights monitoring strategies at all levels. Specifically, tools such as the national sample of cities methodology are well integrated into the City Prosperity Initiative, which allows for the measurement and assessment of urban performance in a representative manner. Already, UN-Habitat has been working with the City Prosperity index, which is one element of the City Prosperity Initiative for monitoring the performance of cities at the global level with a core set of indicators that track inclusiveness, such as monitoring urban infrastructure, the environment or productivity. In addition, City Prosperity index indicators such as access to adequate housing, water and sanitation, access to quality education and access to the Internet, as well as the participation of citizens, or any other civic, cultural, economic, political and social right metrics, are directly linked to many human rights agendas. Through the national sample of cities, the local and national monitoring of youth, gender and human rights inclusiveness aspects will be strengthened. While the global indicator framework adopted by the General Assembly is the authoritative list of indicators for the global monitoring of Goal 11, the index provides complementary information and analysis to that obtained through the global indicator framework. It can be used as an additional tool in the process of implementation of the 2030 Agenda.

25. The City Prosperity index integrates indicators for Sustainable Development Goals relating to urban matters, to address in a single framework the environmental, social and economic components of city prosperity and sustainability. Indeed, all 10 targets and indicators of Goal 11 are integrated in the index. The index therefore has the potential to be a global monitoring platform for Goal 11 indicators and other Goals with an urban component. It is estimated that around one third of indicators relating to urban matters can be measured at the local level, having a direct connection to urban policies, and a clear impact on cities and human settlements. In addition, 23 per

cent of all Sustainable Development Goal targets that can be measured at the local level are covered by the index. Countries that apply the index are able to identify, quantify, evaluate, monitor and report on progress at the national and city levels towards achieving Goal 11. To date, UN-Habitat has supported more than 400 cities across the world in implementing the index. Experiences from deploying the index show that countries and cities that have adopted this unified and standardized platform for the monitoring of and reporting on urban indicators are saving time and resources.

26. The adoption by national statistical offices of an integrated approach for city measurements through the index offers the following advantages:

(a) It provides a single indicator of the state of the city;

(b) It establishes benchmarks for local, national and global monitoring;

(c) It creates a baseline and information regarding the city;

(d) It generates a local monitoring mechanism;

(e) It identifies priorities and transformative actions for achieving sustainable urban development.[5]

IX. Spatial data integration into the monitoring framework for Goal 11

27. Depending on the local context, at least seven indicators for Goal 11 require data collection at the city level using non-conventional methods that go beyond censuses or household surveys. A common feature cutting across the non-traditional sources of data required for those indicators is the inclusion of a spatial component, whether as the main unit of analysis or a determinant of indicator results. Indicator 11.3.1, for example, adopts spatial metrics as one of its main units of analysis (rate at which land is consumed by urban growth), while results for indicator 11.6.2 greatly vary from one area of a city to another based on the concentration of air pollution intensity. Geospatial techniques offer countries effective systems for the integrated management of (spatially referenced) data across all areas of development, and advances in geospatial science – with more open source applications and data sets – create a unique opportunity for countries and cities to collect and/or compile data at higher spatial and temporal resolution, as well as to generate information that is more visual and connected to the physical space, which is essential for informed decision-making.

28. Since 2014, UN-Habitat has established partnerships with diverse stakeholders working in the geospatial field to support the development of modern approaches to urban data generation, to leverage the resources of the geospatial community for enhanced generation of data relevant to Goal 11, and to continuously ensure that the appropriate technologies, approaches and methods are channelled to countries and cities. Some of the key partnerships established include those with the United Nations Initiative on Global Geospatial Information Management, the scientific arms of the European Commission (the Directorate-General for Regional and Urban Policy and the Joint Research Centre), the European Space Agency, the National Aeronautics and Space Administration, the Group on Earth Observations and the African Earth Observation community, among others. In addition, collaborations have been established with entities within countries working on geospatial data to pilot various data collection tools at the local level, and with national statistical offices for the incorporation of related technologies into the conventional data architecture.

[5] See http://cpi.unhabitat.org.

29. In order to support the generation of data on the spatially dependent indicators for Goal 11, UN-Habitat and partners have developed several tools that utilize both commercial and openly available data sources (e.g., satellite imagery) and applications (software). Some of these include step-by-step training manuals on indicator computations and executable applications for automated workflows, which are openly available to countries and cities. The tools have been shared with countries during various regional workshops and have been directly piloted in partnership with national statistical offices and country-based spatial data agencies in Botswana, Colombia and Tunisia, among other countries. In addition, UN-Habitat has developed technical documents that explain how each indicator measures a specific component linked to sustainable development and how policies should respond to reported indicator values so as to achieve progress towards the related goals.

30. While there has been progress towards the adoption and implementation of geospatial data technologies, along with an acknowledgement of the importance of the technologies to future data structures, the prevailing legal and policy frameworks in many countries are still lacking as regards regulating this approach and related outcomes, especially with regard to the incorporation of data collected using such methods into official statistics. In addition, many countries are facing challenges, such as a lack of resources to put in place the proper systems or limited capacities in human resources, as well as those related to the lack of, or high costs associated with, the generation of spatially referenced baseline data. UN-Habitat is working in collaboration with other United Nations system entities and partners to support countries in those areas, with a series of workshops and training sessions planned and some already completed. Other strategic partnerships are being established with various service providers of relevant systems and/or software, for example, with the Environmental Systems Research Institute, for the provision of direct support to cities.

X. City definition

31. Several targets and indicators of the Sustainable Development Goals refer directly to cities as the units of measurement, moving away from the traditional reference to urban areas that also cover cities in particular. Among the many questions that have been asked since the adoption of the 2030 Agenda, where some indicators refer directly to the unit of a city, are questions about what exactly constitutes a city or an urban area; what the size threshold is for an area to qualify as a city; what type of administrative, legal or historical status defines a city; and how to distinguish an urban area from a town or a village. A global definition of the city as a unit of analysis and for monitoring purposes is critical to overcoming challenges as regards comparing the performance of cities. But even at the urban level, a tighter global definition of what constitutes urban, away from rural areas is needed for the purposes of global monitoring and reporting. For example, some countries define their urban areas using a population threshold, or an administrative demarcation, or population density, or the economic function of an area, while others use a combination of the above criteria. Thresholds for each criterion vary widely depending on country-specific guidelines and local definitions. Equally, a diversity of concepts is often used interchangeably to refer to a form of urban area. Examples of such terms include "city proper", "urban agglomeration" or "metropolitan area", each of which represents a different kind of functional urban entity. A concrete guidance on concepts, measurements and unified standards is necessary to ensure that the international community works with harmonized and mutually agreed notions regarding city and urban definitions.

32. UN-Habitat, in line with its custodian role for several indicators that depend on and require a definition of a city, has worked with various institutions and organizations globally towards agreeing on a global definition of a city. The intent is not to change how countries define their urban areas but rather to support the global monitoring and reporting in a more systematic and harmonized manner. Global consultations and expert group meetings organized by UN-Habitat and its partners have led to the narrowing down to two city definitions, which give a good perspective for global monitoring of selected Goal 11 indicators, the unit of analysis/measurement for which is the "city". The two proposed definitions are:

(a) City as defined by its urban extent: the urban extent represents the total built-up area and urbanized open spaces. Built-up areas are defined as the contiguous areas occupied by buildings and other impervious surfaces, classified in three levels based on the share of built-up density (urban-ness) in a 1 km^2 circle around a given point: urban built-up area (greater than 50 per cent density); suburban built-up area (between 25 and 50 per cent density) and rural built-up area (less than 25 per cent density);[6]

(b) City as defined by its degree of urbanization – a classification that indicates the character of an area based on its population size, density and contiguity of settlements in units categorized as "local administrative units, level 2", distinguishing three settlement types: densely, intermediate and thinly populated areas.

XI. Progress on supporting countries in reporting on human settlements indicators

33. UN-Habitat remains a custodian agency for a large set of indicators under Goal 11. Major challenges arise in the monitoring of and reporting on Goal 11, which do not arise in the context of monitoring and reporting for other Goals. A mixed bag of approaches has been proposed for addressing the data needs for Sustainable Development Goal indicators relating to city and/or urban matters, in particular where the city is the unit of analysis. Of the 15 or more such indicators, data for the following seven indicators are being collected at the local city level and not by routine data collection mechanisms such as censuses or household surveys: 11.2.1 on public transport; 11.3.1 on land consumption; 11.3.2 on civil society participation; 11.5.1 on people affected by disasters; 11.6.1 on urban solid waste; 11.6.2 on air quality; and 11.7.1 on public space. In addition, among the 15 indicators, seven require some form of spatial data collection and analysis at the local and/or urban level, with a clear method at the urban agglomeration level: 11.2.1 on public transport; 11.3.1 on land consumption; 11.5.1 on people affected by disasters; 11.6.1 on urban solid waste; 11.7.1 on public space; and 11.b.1 on climate change and resilience.

34. Of the 15 indicators for Goal 11, six require special aggregation techniques to generate the desired data at the national level from city-based data. In some instances, where countries have many cities, this requires working with a representative national sample of cities for each country selected, in such a manner that it reflects the country's territory, geography and history, as well as any other dimensions as discussed in section VII. In addition, some cities and countries recognize the difficulty of integrating a city-wide approach in policy formulation when monitoring and reporting on Goal 11 indicators that are very sectoral in nature. This is even further complicated by the silo approach of ministries and government departments in many Member States' governance systems. UN-Habitat has been working with

[6] See www.atlasofurbanexpansion.org/data.

many partners and Member States to finalize relevant guidelines that offer solutions to such challenges.

35. All countries that have succeeded in reporting on the human settlements indicators of the Sustainable Development Goals have noted the value of having national statistical systems coordinate with local authorities and service providers to collect information at the city level as the unit of analysis, using conventional (e.g., studies and surveys in communities and municipalities) and modern (satellite imagery and information and communications technology) forms of data collection techniques. The use of innovative geospatial tools in data collection systems, including censuses and surveys to measure and to track the performance of cities towards many Sustainable Development Goal targets relating to urban matters is new for many national statistical offices and institutions. Equally, the aggregation of city-level data for reporting performance at the national/country level is new and of paramount importance to many national statistical offices.

XII. Distinguishing slum from non-slum areas

36. UN-Habitat continues to advocate for and monitor the global populations who live in slums. At present, UN-Habitat estimates show that nearly a billion people live in areas generally referred to as slums, in accordance with the UN-Habitat definition thereof. "Any specific place, whether a whole city, or a neighbourhood, is a slum area if half or more of all households lack improved water, improved sanitation, sufficient living area, durable housing, secure tenure, or combinations thereof." A significant hindrance to making slum dwellers count remains an apparent lack of a global definition of what characterizes a "slum area" and ensuring that this definition is mainstreamed in all global data collection processes (surveys, censuses, etc.) through labels directly attached to enumeration areas within the national sampling frames.

37. UN-Habitat continues to spearhead further refinements in definitions of slum areas, and to institute work with several national statistical offices on testing the concept of detecting slums areas through three modalities: (a) innovative digital-based satellite imagery analysis, coupled with ground-truthing and local observation techniques, as well as slum space mapping; (b) census-based slum mapping at enumeration area level, leveraging existing census data and applying the definition of a slum at household level; and (c) incorporating slum area definitions into the upcoming 2020 round of population and housing censuses by assigning the categories "slum", "non-slum" and "rural" area to each enumeration area.

38. Ultimately, the process outlined above will allow surveys and other data collection processes in low and middle-income countries to examine differences in services, access, housing and deprivations across slum and non-slum urban areas. Examining such area-based differences will help in the formal recognition of the fact that slum challenges are not the same as urban challenges, thereby improving visibility for a currently marginalized and vulnerable slum population, which is aligned with the spirit of leaving no one behind.

XIII. Conclusion and recommendations

39. The challenges of collecting and monitoring human settlements statistics appear to constrain the ability of policymakers in government and of leaders to formulate effective national urban and human settlements development policies and to guide evidence-based urbanization. The emergence of new sets of indicators dependent on spatial analysis technologies and systems may constrain the ability of many countries to report, until 2020 at least. However, many countries have now updated their human

settlements and urban indicators databases, but the collection of data for some of the new and spatially challenging indicators will require a significant amount of time, from the data collection phase at the lowest layers of cities to the aggregation thereof at the national level.

40. Considering the above, both capacity-building and resources will need to be scaled up in order to build data systems that offer alignments in data collection processes such as in methodological development work, including by addressing definitions of new urban concepts. It is also essential to enhance political, legal and institutional frameworks, as well as financial support, at the local level. Goal 11 has 10 targets and 15 associated indicators on which cities and national governments need to report. In addition, most of the 234 indicators associated with the Goals have a direct connection to urban policies and a clear impact on cities and human settlements.

41. The monitoring of and reporting on progress towards Goal 11 presents major challenges that need to be addressed at the global, national and local levels. Many countries acknowledge the challenges related to the implementation of Goal 11 and are requesting technical support for effective monitoring and reporting. Over the past four years, the custodian agencies have witnessed an increased demand from Member States and local governments for technical support related to building their capacities to collect, analyse and draw policy formulation from their local data.

42. As a result, UN-Habitat and other custodian agencies have invested a significant amount of time and resources in supporting Member States to set up the required monitoring systems for Goal 11. Custodian agencies have developed new and relevant guides and materials and have clarified definitions that are needed for global urban monitoring concerning that Goal, in collaboration with various stakeholders.

43. A few Sustainable Development Goal indicators relating to urban matters require the reporting territorial level of the city as a unique entity of analysis. Several of the indicators for Goal 11 must be collected and/or computed at the city level, although the monitoring and/or reporting will be done at the national level. Agreeing on an operational definition of a city from a statistical and spatial perspective has been a major preoccupation of the many expert group meetings organized by UN-Habitat and partners over the past two years. The issue has also been a major factor in decisions of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators on whether to reclassify some indicators from tier III to tier II. Following concerted rounds of discussions with partners and custodian agencies, two global definitions of cities are now available, as set out in paragraph 32 above. The definitions will support the global monitoring on and reporting of the performances of cities in a more systematic way. It is important to note, however, that a common definition does not mean that countries will have to change how they define a city or urban area in their own countries.

44. UN-Habitat will continue working with local urban observatories worldwide as the local interlocutors for urban data collection and for integrating evidence directly into the formulation of local urban policies and plans. Observatories in high- and middle-income countries have the resources, both technical and financial, to sustain the roll-out and implementation of urban monitoring in relation to the Goals. New tools for enhancing the capacities and knowledge of observatories on monitoring of progress towards the Goals have been shared through regional workshops, in order to disseminate the new tools to urban observatories, and the subsequent feedback was used to address and refine the tools.

45. The City Prosperity Initiative, a flexible framework for the formulation, implementation and monitoring of policies and practices on sustainable development to increase prosperity levels in cities, can be leveraged for monitoring Goal 11 indicators as it integrates indicators for Goals relating to urban matters in order to

address in a single framework the environmental, social and economic components of city sustainability. Countries and cities that have adopted the Initiative for the monitoring of and reporting on urban indicators in the context of the Goals are saving time and resources.

46. Despite significant progress in developing the monitoring tools and methods for Goal 11, further work is needed, especially in terms of applying them to all countries in all regions. Localizing the urban monitoring tools sometimes requires a few refinements, which UN-Habitat and partners are addressing in parallel. It will take time for results to materialize from capacity-building efforts aimed at aligning data collection processes and methodological work, including definitions of concepts to the requirements of Goal 11. As such, for the next two years, additional resources will be needed in order to allow custodian agencies to reinforce their coordination and to support efficient monitoring. It is necessary to enhance political, legal and institutional frameworks, as well as financial support, at the local level.

47. At the city level, urban management and development processes involve many actors and at different levels (political bodies at the national, subnational and local levels), and in a few countries work continues directly with national authorities to demonstrate how this should be done for urban monitoring. Given that different stakeholders are involved in the production of various supporting indicators required for monitoring progress towards Goal 11, it is recommended that the role of urban observatories as focal points for urban data and reporting be enhanced. In addition, a formalized coordination mechanism involving all data producers, with a clear mandate and specified role and responsibility at all levels, is required.

48. Many countries are facing challenges associated with policy frameworks and the integration of data generated from alternative sources. Despite the sources being proven to be reliable and accurate, and the data offering important information that can influence policies in support of sustainability, such data cannot, in certain circumstances, be incorporated into official statistics, as required for the monitoring framework. While some countries cite the lack of clear verification mechanisms for specific sets of data (such as those collected by communities), others acknowledge that sources such as those based on geospatial analysis provide accurate and up-to-date data, which can complement conventional statistics. There is a need to develop guidelines as to how countries can streamline and update their data collection processes in line with modern approaches, such as those required as part of the monitoring framework for the Goals, which should be attained through multi-stakeholder engagement methods.

XIV. Points for discussion

49. **The Commission may wish to:**

(a) **Endorse the adoption of the national sample of cities methodology for countries that are constrained in terms of the national monitoring of and reporting on all cities for which data are available;**

(b) **Endorse the creation of a group of experts for the revision of the guidelines and principles for the implementation of the City Prosperity index;**

(c) **Endorse the creation of a group of experts for the development of guidelines for identifying slums and non-slum enumeration areas;**

(d) **Comment on challenges related to the definition of the city, including on the disaggregation of data by type of human settlement (urban, rural, and**

slum versus non-slum urban), especially in the context of the Sustainable Development Goals;

(c) Comment on the most effective coordination mechanism for the work on human settlements statistics at the international level.

Annex

Advantages and description of the main steps proposed for the selection of a national sample of cities

1. The procedures set out below describe the main steps proposed for the selection of a national sample of cities:

(a) A complete listing of all cities in a country is compiled creating a national sampling frame of cities;

(b) Relevant city descriptive data are collected for each city (geographical location, population size, categorization in terms of importance, number of women/youth, etc.);

(c) Cities are grouped using major categories of interest defined at the national level and a simple random sampling of cities applied in each category;

(d) A final list of sampled cities is reviewed and agreed upon by selected stakeholders under the guidance of the national statistical office.

2. The adoption of a national sample of cities offers the following advantages:

(a) It integrates cities of all sizes, functions and types as part of a national system of cities that can help to amalgamate the disjoined energies and potential of urban centres;

(b) It assists in the aggregation of locally produced city indicators for national monitoring and reporting, and for the production of regional and global reports and analysis;

(c) It provides a platform for collecting different layers of data with a unified methodology that can be used to report on national progress towards the Sustainable Development Goals or other elements of the urban agenda;

(d) It allows the calculation of an unweighted national average as well as weighted national averages on the overall Sustainable Development Goal indicators relating to urban matters;

(e) It creates baseline data and establishes benchmarks and national targets with the same technique of standardization, which will enable comparisons of indicators and city measurements;

(f) It facilitates a systematic disaggregation of information at the national, subnational and city levels along key Sustainable Development Goal indicators and in line with the dimensions of development needed to address territorial disparities.